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A LECTURE ON HÆMATURIA OR VOIDING OF BLOODY URINE.

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[Reported for this Journal.]

These are wretched appellations, not at all conveying a just notion of the affection, which is really a hæmorrhage that may arise from the kidney, the ureter, bladder, or urethra, and should be designated, accordingly, hæmorrhagium renum, hæmorrhagia vesicæ, &c. From its derivation, hæmaturia strictly means mixture of blood, though the English phrase I have given is commonly adopted as its equivalent. The term is differently applied by the authorities, some using it to denote a bleeding from the kidney only, calling that of the bladder cystirrhagia, while others embrace under it the sanguineous effusions of the whole of the urinary apparatus, and in this extended sense, it is now mostly employed, and for the present will be retained by me.

Coming from different sources, and occasioned by a diversity of causes, the symptoms of this hæmorrhage must necessarily be exceedingly modified. Generally, however, it is characterized by obtuse pain, and sense of weight in the loins, sometimes extending down the thigh, with, perhaps, retraction of the testicle, the urine at first high coloured only, then of a darkish red, owing to the dissolved blood, or tolerably clear with small clots floating in it, or the discharge may consist of pure blood, black and grumous, or be entirely suppressed, from the urethra being choked up by coagula. This occurring, the bladder sometimes fills to a painful distension. Distinct, however, from such a condition, there may be great uneasiness in that viscus, dull, heavy, or burning, or pricking sensations, and those of swelling in the perineum, with frequent erections of the penis, and spasm, resembling chordee, attended by tenesmus and strangury, or micturition.

Concomitantly with these local affections, some constitutional disturbance generally exists, evinced by fever, or at least an irregular circulation, and especially by headache, and nausea, and retchings. The symptoms, however, as I have said, are extremely diversified. On some occasions, there is apparently no affection whatever, except the discharge of blood, which passes away without any suffering.

Like every other hæmorrhage, this may proceed from general or local causes, though of the former, instances are of rare occurrence. But it has been seen by myself, and by others, occasionally to appear, consequent on a plethoric condition, with undue determinations of blood to the parts. No doubt whatever can be entertained of its connection with both inflammatory and congestive fevers, as well as other acute affections, in which some portion of the urinary organs has become involved. Certain articles, too, operating through the system, though from a sort of specific affinity, concentrating their force more immediately on the source of the hæmorrhage, lead to its production,—among which are phosphorus and cantharides, and in regard to the latter, whether applied to the skin as a vesicatory, or taken internally.

As a further illustration of the sympathetic production of hæmaturia, it may be mentioned, that it has been noticed as an incident of painful dentition in children, and also from the irritation of worms in the alimentary canal. More frequently, however, it is met with from metastasis of the catamenial or hæmorrhoidal flux, especially or vicariously to these discharges.

Nevertheless, hæmaturia is mostly to be traced to causes operating directly on the part, some violence done to the kidney by blows or falls, or from lifting heavy weights, or leaping, or hard riding. By the irritation of a calculus in the kidney or the ureter, or bladder, it is also induced, and there is a case recorded of its having been brought on by a worm in the second of these positions. Besides which, it is the effect of many organic lesions of these structures, arising from the numerous diseases to which they are exposed.

Every period of life is liable to this hæmorrhage, from childhood to extreme age, though, I think, it is more frequently seen among the old and infirm, broken down by gout, or intemperate or debauched habits.

It may happen where the amount of blood is small, and intimately commingled, or it has undergone some change in its consitution thereby rendered more pallid, or the urine becomes of a more reddish or darker hue from an excess of its saline ingredients, or of lithic acid, a case is presented of some difficulty of discrimination on a superficial examination. But here, we are supplied with a test of great certainty. Dipping a piece of linen into the fluid, however minute the quantity of blood, it is stained of a reddish tinge, which does not take place otherwise.

Not so easy is it, at all times, to determine the precise part of the urinary apparatus whence the blood escapes. As a general rule, however, it will be found in the renal and uretral cases, that, with much more lumbar affection, the blood is usually intimately mixed with the urine, so as to give to it one uniform red appearance, whereas, in the vesical hæmorrhage, it comes away in clots, or flocculi, floating in the urine, and is accompanied by pain, a sense of fulness and tenderness of

the pubic region, and those other indications of an affection of the bladder. No perplexity can exist with regard to that of the urethra, for independently of the absence of the symptoms appertaining to the other cases, the blood is emitted without mixture with urine, or an effort to its evacuation. It were fortunate could we come to any satisfactory conclusion concerning the several pathological conditions giving rise to this hæmorrhage. But sometimes it cannot be done, though much in other instances may be accomplished by a diligent investigation of the history of the case, and comparison of symptoms, as well as by a careful inspection of the urine, which containing mucus pus or gravelly deposits, considerable light is shed on the subject.

Excepting in those acute cases, in a sound and vigorous constitution, owing to a general redundancy of blood, or local accumulations of it, or its occurring metastatically or vicariously, and here, if not salutary it does little or no injury, hæmaturia is to be deprecated, not so much from any danger in itself, as its indicating some serious derangements of the organs, whence the hæmorrhage proceeds. Nevertheless, it may be immediately alarming in appearance, from an immense loss of blood.

In the winter of 1831, I attended an elderly gentleman, of a very full, plethoric habit, who voided on an average about three quarts of nearly pure blood in the twenty-four hours for three successive returns of this period, and which continued in a diminished quantity till he became nearly exhausted.

Not many months afterwards, he had a repetition of the attack, in which he lost, in the aggregate, perhaps, an equal amount of blood, though not in so short a time. Many recurrences of it had he subsequently, on each occasion profusely, till he died, which was not, however, of the hæmorrhage. Death indeed from it very seldom happens. The register of the Vienna Hospital shows only a solitary instance, out of thirteen thousand six hundred and forty-seven cases of the affection.

Effusions from the kidneys and bladder are of course the most copious. Being, however, of a vital character, they either spontaneously cease, or are readily checked, and seldom prove detrimental. But it is very different with the physical, or those dependent on organic derangements. The cause here enduring permanently, so must the effect, or if the latter be removed, it is temporarily, reverting again at no distant interval. The most ominous occurrence, however, of hæmaturia, is in the advanced stages of low fevers, and other diseases of extreme exhaustion. But this happening it is purely passive, a mere leakage of blood, from the impairment or absolute extinguishment of vital power, and can scarcely be deemed a genuine hæmorrhage. On the whole, our prognosis must be derived, from the estimate formed of the condition of the parts, and the system generally, with which the hæmorrhage may be associated.

Of the autopsic phenomena in the acute and vital form of hæmaturia, I have no precise information. They may, however, be conjectured from the history of the disease, varied by the seat and cause of it. The kidney, itself, probably presents similar appearances to those in other parenchematous hæmorrhages, and the ureters, bladder, and urethra, such as are observed in the mucous membranes generally. But, in chronic cases, every variety of disorganization of structure of the kidney, and bladder especially, has been reported.

Equally may its pathology be deduced from analogy, and I shall, therefore, occupy little time on a point, the discussion of which were merely a recapitulation of what has been, on preceding occasions, amply expounded. Excepting the cases caused by acts of violence, or organic changes, every other may be referred to the mode in which I have shown vital hæmorrhage to take place. Even the former are not invariably otherwise induced. Mostly, where the lesion is excessive, a rupture of vessels is to be presumed, though these may escape,—and certainly where the injury is less, it operates merely to the irritation of the capillaries through which the blood is effused.

In the treatment of this, we are to be guided by the same general principles as in other hæmorrhages, having special regard to the existing pathological condition. The case exhibiting local phlogosis, or active congestion, or febrile excitement, we resort to venesection, cupping or leeching over the lumbar region, slight purging, demulcents, and especially an infusion of peach leaves, or of the petals of the red rose. The two latter articles, though apparently very simple, are the most efficacious with which I am conversant.

Many instances I have seen, that resisting more energetic means, were relieved by these mild remedies. It is customary, I am aware, to rely here mainly on those astringents which are supposed so efficacious in the kindred affections. But, really, I have witnessed no decisive advantage from them, and, certainly, they are more appropriate to another state of the hæmorrhage, presently to be noticed. As usual is it to administer largely the diuretics, the nitrate of potash particularly, with the beverages promotive of its operation, to which I entirely object, provided the kidney be the seat of the effusion, and already unduly excited. The reverse, indeed, is the indication, under such circumstances, rather to allay, than provoke any increase of action, by forcing it to greater secretory efforts.

In a case of less activity, if admissible at all, venesection must be comparatively moderate, and topical bleeding chiefly used. Blistering over the lumbar region is entitled to great confidence. That it has been strenuously opposed, is not unknown to me, though on false grounds. From experience I have learnt, that it may be as safely and efficaciously adopted, as in any of its ordinary employments. But the blister should be permitted to remain on long enough only to produce simply a rubescence of the skin, by which its

beneficial effect is amply attained, and the danger of strangury prevented.

This is the conjuncture to which I alluded, when the acetate of lead, the sulphate of alumine, the muriated tincture of iron, the gallic acid, the elixir of vitriol, the creosote, and alike articles, may be tried with a fairer prospect of success. Yet I confess, that I have found them, even here, of very equivocal utility. As to the uva ursi, so commended by some, it has totally disappointed my expectations. But the tincture, in combination with gallic acid, is, of late, very favourably spoken of, which I have not used. The best article known to me is the spirit of turpentine.

Emetics had formerly great reputation, and I believe deservedly, though I have never had recourse to them,—finding, on all occasions to which I deemed them appropriate, measures less disagreeable to answer.

Much of this treatment is equally suited to hæmorrhage of the bladder. The topical applications are usually made to the pubes or the sacrum, as nearer the seat of the affection. Yet. leeches to the groins and perineum are more effectual. It has also been proposed to inject into the bladder cold mucilages, or astringent fluids, according to the indication.

Great suffering, I have said, is sometimes felt by a retention of blood from an occlusion of the urethra. This is removed, at once, by the introduction of a bougie or catheter.

It is obvious, that the management of these cases requires to be further accommodated to their peculiarities. Excited, for instance, by calculi, and especially when a small one is lodged in the ureter, though the hæmorrhage may be slight, the agony is extreme. Disregarding the effusion, our attention must be directed to the mitigation of pain, and to the passage of the calculus through the tube, by which complete relief is only afforded. Fortunately, the means are the same with both intentions, consisting of general and local bleeding to a great extent, the warm bath, and opiates, chiefly as enemata. Caused by any material structural lesions, it is better, in an inflammatory condition of the parts, to allow the hæmorrhage to continue, as serviceable, unless it be inordinately profuse. Then, or in a case of original debility, the balsams or terebenthinates are to be preferred, in reference to a suppression of the effusion, and with a view to the alleviation of the pain, commonly an attendant, the opiates.

In the arrestation of this hæmorrhage, when active, from whatever source it may emanate, or the cause occasioning it, much will depend on the adoption of a course of living, to the total exclusion of every article, whether of food or drink, of a heating or stimulating kind, and, scarcely less, on the strictest observance of a state of rest during and for some time after the effusion. Equally does the latter clause of this precept apply to the opposite state of the affection,—but the diet should be more nutritious, though still bland, or without any irritating qualities.

Need it be added, that before dismissing the case, the pathological condition to which the effusion is owing, is carefully to be ascertained, with a view to its rectification or entire removal?

PHILADELPHIA DISPENSARY.

Report for March, 1839.

The whole number of persons who have received medical aid from the institution, during the month, is 235,—of whom 126 were prescribed for at the dispensary, and 109 at their own dwellings.

Of the latter, 44 were males, and 65 females,—87 natives, and 22 foreigners,—97 white, and 12 coloured,—99 were cured, and 10 died.

The deaths were from pneumonia, phthisis, and meningitis, each two,—from chronic bronchitis, pertussis, scarlatina, and scrofula, each one.

The diseases of most frequent occurrence were catarrh, pneumonia, and rheumatism.

In addition to the above cases, several were sent to the almshouse or hospital during their treatment, and none yet remaining are included in the report.

Quarterly Report of the Obstetric Practice in the Philadelphia Dispensary. Dr. WARRINGTON, Accoucheur.

Since the annual report for 1838, thirty-six cases of labour, at term, have been attended to in this institution.

Twenty-one boys, and sixteen girls, have been delivered—one woman having twin daughters.

Of twenty-four cases in which the position of the child was carefully noted, sixteen presented in the first, six in the second, one in the fifth, of the vertex, and one in the first position of the breech.

The average duration of labour, in seventeen cases, was nine hours and forty-two minutes—the extremes being two, and twenty-six hours.

The average time required for the spontaneous delivery of the placenta in twenty-five cases, was twenty-six minutes—the extremes being two, and two hundred and forty minutes.

Several cases occurred, in which, in consequence of the contraction of the os uteri, the placenta was retained, requiring the introduction of the finger, or whole hand, to bring it down edgewise.

In one case, the chorion was found adherent to a considerable portion of the surface of the uterus after the expulsion of the placenta. It was detached by the careful introduction of the hand.

There were two cases of hæmorrhage during labour,—one commencing several days previous to regular uterine contractions, and the other at the beginning of actual labour. The hæmorrhage subsided in both cases as soon as the first stage of labour was completed. In one of these cases, the edge of the placenta could be distinctly felt at the os uteri; in the other it was less satisfactorily recognised.

There was one case of rigidity of the os uteri, which, after irregular, but powerful contractions of the uterus for several days, yielded, very slowly, under the use of free bleeding, purging, and morphia.

In one case, as soon as a very large bag of waters was ruptured, the greater part of the umbilical cord descended into the vagina, and, in consequence of the firmness with which the head immediately engaged in the superior strait, it was impossible to return it. The forceps were applied, and the child delivered in about three minutes after the discovery of the fact. About two inches of the fœtal extremity of the cord pulsated pretty strong when the child was extruded; respiration, however, could not be established, although vigorous efforts were made by my pupil, I. H. Harrisson, and myself, for more than half an hour.

One patient, the subject of the crotchet delivery alluded to in last report, was taken in labour at term, one year and fifteen days after that event. Upon a careful examination, the lower part of the sacrum presented a slight convexity forwards, thus considerably reducing the antero-posterior diameter of the cavity and inferior strait of the pelvis. The first stage of labour was completed in about ten hours; the membranes ruptured spontaneously. The child's head remained wedged at the upper part of the cavity of the pelvis, without advancing under very active uterine contractions. The forceps were applied, and a fine, healthy child, delivered in half an hour, in the presence of several members of the obstetric class. The patient and child did well, the mother resuming her domestic duties at the end of the second week.

The forceps were also applied in a case under the care of Dr. Berkeley, one of the district physicians, in consequence of ineffectual efforts of the uterus to deliver the child from the inferior strait. The object was readily and safely effected.

There were several cases of uterine congestion with great tenderness in the hypogastric region, but generally without fever: all readily yielded to moderate bleeding, oily purgatives, and warm fomentations.

There was one case of well-marked metro-peritonitis; it promptly recovered under the free use of the lancet, and application of leeches to the vulva and hypogastrium.

In addition to the above, there was one case of abortion at the fifth month of gestation, in which the child appeared to have been dead for some time.

A premature delivery at seven months, with the feet presenting; child lived about twelve hours. One at near eight months, presenting the breech in the fourth position; child lived about six hours.

Several children were attacked with ophthalmia; most of them recovered rapidly under the use of solution of nitrate of silver, and mucilage of the medulla sassafras. One child, for whom no nurse could be obtained, suffered from great intensity of the disease, and died in convulsions on the eighth day.

One case of monstrosity occurred in a child, which died in a few days from defect of organization.

Thirty of the above cases of labour occurred in the presence of some one or more members of Dr. Warrington's class.

The following report of a case is furnished by Dr. Patterson, one of the district physicians for the dispensary:

Feb. 16*th*, 1839.—I. N. had irregular pains; os uteri not dilated.

17*th*.—Pains continued all night, now more frequent and severe; os uteri still closed. Attempted bleeding, but succeeded in getting only ℥v. to ℥vj.

Evening.—Os uteri dilated about a line in diameter. Bled ℥xxv.

18*th*.—Pains frequent and forcing; os uteri size of half a dime. Called Dr. Warrington. Bled ℥xxx. Gave tart. antim. freely. It caused vomiting, but not much relaxation.

Evening.—The distended bladder formed a prominent and distinct tumour in the hypogastrium. With some difficulty a very small male catheter was introduced, and more than a quart of urine drawn off. Bled from a vein in each arm, the patient standing; but, although syncope did not ensue, could obtain only about ℥v. of blood.

Evening, 11 *o'clock*.—Os uteri still undilated beyond the size of a dime. The waters had passed off more than twenty-four hours since. The suggillated scalp could be felt forming a tumour protruding through the small opening in the uterus. Made a free application of softened extract of belladonna to the os and cervix uteri. Dilatation now proceeded so rapidly, that the child was born in the presence of a medical friend, at 2 A. M., of the 19th. The child was dead, and the scalp greatly ecchymosed. The uterus remained in a state of congestion for several days afterwards. Patient recovered.

University of Pennsylvania.—The medical class in this institution for the session 1838–9, numbered *four hundred and two* students.

At a public commencement, held April 5th, 1839, the degree of Doctor of Medicine was conferred by the Rev. Provost, John Ludlow, D. D. on *one hundred and forty-six* gentlemen. An eloquent and impressive charge was delivered by Professor Chapman.

To the Editors of the Medical Examiner.

Gentlemen,—Enclosed is a general statistic of the cases treated in the Wills Hospital since its opening in March, 1834, down to January 1, 1839. Should it be appropriate to the pages of your journal, it is at your disposal.

Respectfully,

Jno. Neill, Resident.

Wills Hospital, April 12, 1839.

Statistical Report of the Wills Hospital for Diseases of the Eye and Limbs.

	No. of Cases.	No. Cured.	No. Relieved.	No. Removed.	No. Incurable.	No. in the House.
I. Of the Eye.						
Amaurosis,. . .	23	6	5	4	7	1
Cataract, . . .	24	9	7	3	4	1
Conjunctivitis, . .	12	11	0	0	1	0
Cornea, Opacity of . .	7	1	3	0	1	2
Cornea, Ulcer of . .	11	9	0	1	1	0
Corneitis, Scrof. . .	2	2	0	0	0	0
Inj. and Wounds of Eye,	5	4	1	0	0	0
Iritis,.	12	8	3	0	1	0
Lagopthalmus, . .	1	0	1	0	0	0
Lippitudo, . . .	2	1	1	0	0	0
Nebula, . . .	5	3	2	0	0	0
Obstr. Lachr. Duct. .	2	1	1	0	0	0
Ophthalmia, . .	55	46	9	0	0	0
" Catarrhal, . .	1	1	0	0	0	0
" Chronic, . .	16	13	2	0	0	1
" Granular, . .	10	8	1	0	0	1
" Leucorrheal, .	1	0	1	0	0	0
" Purulent, . .	5	2	2	1	0	0
" Pustular, . .	1	1	0	0	0	0
" Rheumatic, .	6	5	0	0	0	1
" Scrofulous, .	27	22	3	2	0	0
" Tarsal, . .	12	8	3	0	0	1
	240	161	45	11	15	8
II. Of the Limbs.						
Abscesses,. . .	4	0	2	2	0	0
Chilblains, . .	1	1	0	0	0	0
Coxalgia, . . .	1	0	0	1	0	0
Disease of Joints, .	8	3	3	3	0	0
Fractures, . . .	5	5	0	0	0	0
Gout,. . . .	1	1	0	0	0	0
Paralysis, . . .	2	1	0	0	1	0
Rheumatism, . .	13	10	1	1	1	0
Ulcers, . . .	5	3	0	1	1	0
Wounds, . . .	3	2	1	0	0	0
	44	26	7	8	3	0
Total, ...	284	187	52	19	18	8

	No. of Cases.	No. Cured	No. Relieved.	No. Removed.*	No. Incurable.	No. in the house.
1834, . .	31	18	8	2	3	0
1835, . .	49	27	15	5	2	0
1836, . .	51	39	7	1	4	0
1837, . .	66	40	15	5	5	1
1838, . .	87	63	7	6	4	7

**Removed.* Those in whom the treatment was not completed. They were either removed by friends, discharged as disorderly, eloped, or died.

BIBLIOGRAPHICAL NOTICE.

Principles of Special and Comparative Physiology, intended as an introduction to the Study of Human Physiology, and as a Guide to the Philosophical Pursuits of Natural History. By Wm. B. Carpenter, Member of the Royal College of Surgeons, &c. &c. London: 1839. 8vo. pp. 470. With numerous Engravings on Copper.

Physiology has always been deeply imbued with the spirit of the dominant philosophy of the age—the scientia scientiarum, which has for its object the investigation of the principles of all human knowledge. Since Greece boasted a philosophy this has been the case. The theories of the ancient physiologists were grounded on and modified by the favourite metaphysics of the day. On the revival of letters, the same union was again effected, and continues until the present time. As it has been speculative or practical, so has been medicine. As it was sectarian, or eclectic, or catholic, so was medicine. The Italians, the Ionians, the Academicians, the Peripatetics, profoundly tinctured the medical dogmas of their age. Since the sixteenth century the doctrines of Descartes and Leibnitz, of Locke and Bacon, of natural or acquired ideas, as well as the gloomy and gorgeous mysticism of Kant, have either led to the grossest materialism and necessity, or to the idea of some subtle and incomprehensible vitalizing essence. Within a few years philosophy has assumed some determinate shape and purpose, and we accordingly find medicine partaking of the same spirit. Unfortunately, however, the vast mass of facts which ages should have collected in the great treasury of knowledge, is found to be so alloyed and debased, as to compel its cultivators to re-commence with the elements. That this portion of the labour will be properly conducted we may reasonably anticipate, and a slow but steady progress to truth must necessarily result.

The object of the ancient philosphy seems to have been the resolution of enigmas; a mental achievement which though it doubtless invigorated the intellects of the disputants, neither increased the comforts of the mass, or in any wise alleviated their miseries. Many of the most powerful and brilliant minds that any age could boast, were thus systematically perverted, and industry, ingenuity and zeal were absolutely wasted on the vaguest and most fruitless subtilties. There was continual and extraordinary exertion, but no

corresponding progress. It transmitted to posterity no heritage of truth. To use the language of a profound and eloquent writer on that period, "every trace of an intellectual culture was there but the harvest. There had been plenty of harrowing, reaping, and threshing. But the garners contained only smut and stubble." An insatiable thirst for novelty as well as victory characterized their sages, and ingenuity, distortion, and garrulity were their chief weapons. There was nothing practical, nothing useful, proposed, or attained. "It was an intricate wood of briers and thistles, from which those who lost themselves in it brought back many scratches and no food."

How immensely different are the intentions and designs of modern philosophy—the extension of rational enjoyment; the mitigation of suffering. "A point which was invisible will be its goal to-day, and its starting place to-morrow."

Our chief care should now be to avoid all tendency towards a retrograde movement, which would prostrate the foundations which have been just reared, and which promise to be adequate to the support of the mighty edifice to be erected. We feel assured that no more effective barrier can be interposed than an early and deep devotion to the physical sciences among the builders of the temple. The elements of these are easily attained in early life, and by their mental training must exercise the happiest influence on the intellectual constitution of man. The collateral benefits of such a course of study is its rigorous mental discipline, rather than any appreciable amount of positive knowledge. It habituates the mind to habits of strict reasoning, and to the contemplation and comprehension of the most important and complex mental processes, familiarizing it with that peculiar conviction produced alone by demonstration,and excluding all considerations not entering therein. A habit of scrupulous and vigilant reasoning is thus engendered, becoming in time of incalculable advantage. Perhaps a moderate acquaintance with the principles of abstract science, is the most suitable introduction to the study of physics, as from their definite objects and distinct ideas we invariably learn and appreciate that precision of language as an instrument of reason, which materially lessens the chance of future error and confusion. It impresses one, moreover, with the distinction between strict and vague reasoning, giving one accurate and positive ideas concerning demonstrative evidence.

The legitimate object of scientific investigation, are the principles or laws regulating the phenomena we notice. The effects, or insulated facts, are subjects of daily observation to the most uninitiated. The province of the philosopher is to ascertain how they are determined and regulated. Art has been defined to be, the application of knowledge to a practical end. It is empiricism, when it is simply accumulated experience. It becomes a science, when submitted to the process of reason, and subjected to certain general principles.

Much has been recently said relative to the introduction of the self-styled Baconian philosophy into medicine; and a school has been erected, having for its avowed object the dissemination of principles, which, in the sanguine expectation of its members, are to lead medicine swiftly and surely to the long-sought land of promise. Much as we respect the intentions of this sect, and appreciate their labours, we feel ourselves called on to pronounce their claims as the only true *observers*, as unfounded, and their gratulatory cries of triumph as entirely premature. We do not regard M. Louis as the Moses of medicine, much less its Joshua, any more than the Hôtel Dieu as Mount Pisgah. We feel confident in the assertion that his followers will never reach the verge, much less penetrate the heart of Canaan. That work is, if we mistake not, reserved for another age. The materials may be collecting; but the present generation is not, we fear, to have the honour of giving the architect. Many wildernesses are yet to be traversed, many rapid and bitter streams to be crossed. We are at best in a state less of full development, than of happy progress. Let some definite object always be kept in our "mind's eye," which will stimulate us to the careful and accurate performances of the mental processes, and success will eventually crown our labours. The true philosophical spirit has been characterized as one of much hope and little faith.

Greek philosophy recognised the necessity of observations, and asserted their paramount value. But these steps alone did not lead to science. Aristotle expressly asserts, "the way must be the same with respect to philosophy, as to any art or science whatever. We must collect the facts, and the things to which the facts happen in each subject, and provide as large a supply of these as possible." (*Annal. Prior.* i. 30.) Mr. Whewell, in his admirable and philosophical history of the Inductive Sciences, has cited innumerable passages from the writings of

the Stagyrite, in the tone and spirit of modern philosophy. Every mental process of the humblest intellect is always an induction, and conducts to truth or error according to the mode in which it has been performed—with accuracy or with carelessness. By induction, nature is said to be interpreted, and not anticipated. But, is not the anticipation, after all, but a slovenly interpretation, in which some vital element is overlooked? We do not believe that rules, no matter how strict, or systems, no matter how elaborate, will ever be a successful substitute for natural sagacity, judgment, and patience. The merits of the *observers* of our day we do not pronounce overrated, but only misunderstood.

In studying the history of science, we mark the development of human intellect from its simplest expression to its most intricate processes. These mental cycles seem to us to be best indicated and classified by M. Compte in his recent invaluable publication.* In its infancy, thirsting after a knowledge of final causes, the mind refers all the anomalies of creation to supernatural agents, who directly or remotely exert their influence. This is the age of superstition and theological tyranny. Next the metaphysical philosophy gives rise to the entities, or personified abstractions, inherent forces generated in the material universe, producing and regulating its phenomena. This is the state of transition, or chrysalis. Lastly arises the positive philosophy, to which science tends as its ultimate haven and abiding place. It abjures all profitless speculation about the origin or purpose of things, and, contenting itself simply by combining *reason* and *observation*, by inquiring what are the relations of succession and similitudes, endeavours to refer all things to various acts of some grand and general principle. Nowhere, perhaps, in the whole range of philosophical literature, is so admirable a practical illustration of the spirit of this doctrine given, as by Fourier in his *Theory of Heat*, where, without noticing either the intimate nature of heat, or the calorific sects, he enunciates precisely and fully the most important thermological laws.

An attentive perusal of Mr. Carpenter's work has afforded us the liveliest gratification, and induced us to hazard the present remarks. It is conceived and executed in a truly happy and philosophical spirit. It fills a sensible gap in English physiological literature, long deeply felt, and which the translation of Tiedemann's publication did not meet. We would earnestly recommend it to all students of physiology, and to all who intend to become students. We are convinced that a general survey of the analogies and intimate connexion between all animated nature forms the best introduction to the great object of his future studies—the last link in the organic chain.

Mr. Carpenter throughout this work exhibits an extensive and accurate acquaintance with human and comparative physiology and anatomy, as well as botany and zoology, and when we consider that the author is a young man, and a recent graduate, the highest anticipations of future excellence and ability may be rationally indulged. We have room only for a short extract from the preface, and to add that the literary character of the work is highly creditable.

"It is now generally acknowledged that physiology can only be properly studied by a constant reference to the comparative structure and functions of many different classes of animals; and in most of the recent works on this science, an outline of the development and actions of each system in the inferior tribes is prefixed to the details relating to its condition in man. This outline is filled up in the present volume, not only by amplifying the portion of it which relates to the animal kingdom, but also by the introduction of a similar view of the comparative structure and functions of vegetables, which is here shown to be governed by the same laws. It is this which constitutes the peculiar feature of the work; as the author believes it to be the first attempt, in this country at least, to form any thing like a systematic comparative physiology of vegetables. The translation of the elaborate comparative physiology of Tiedemann would, indeed, have occupied this ground; but it is still incomplete, and is likely to remain so; and the mass of details which it embraces, unconnected by comprehensive principles, renders it most tedious and embarrassing to the student. From that most valuable storehouse of *facts*, the present volume differs essentially, therefore, in plan; this being devoted to the explanation and illustration of general *laws*."

* Cours de Philosophie Positive. Par M. Auguste Compte. 3 tom. Paris: 1830-5-8.

CLINICAL LECTURE.

PHILADELPHIA HOSPITAL.

ON PNEUMONIA—(CONTINUED.)

As an illustration of pneumonia, complicated with disease of the brain, I cannot do better than read to you the case of a young negro, of a slender frame, whom you have several times seen. It is an instance of arachnitis supervening towards the termination of the pneumonia, and therefore strictly secondary. You must have

been already surprised at the very insidious nature of the disease, and the slight symptoms of the cerebral inflammation.

Pneumonia with Arachnitis—Fatal Case.

Charles Abriel, aged 22, entered the hospital January 8, 1839. He has recently been travelling through the country sweeping chimneys. Was taken ill on Friday the 3d; quite well previously; on that day was skating, after his return from a journey. On the night of the 3d to 4th, was seized with cough and spitting of blood, (about two ounces,) hæmoptysis not repeated; cough has continued ever since. The pain began the same night on the right side, near the nipple; prefers lying on the left side; chills irregularly through the day, but he is not conscious of sweating. Vomited only once while on his way to the hospital. Walked from the city in an hour, a distance of nearly two miles.

No treatment, drank no spirits.

8*th.*—Admitted during the morning visit; much exhausted; dyspnœa great. Pulse rather full; cough; bronchial respiration at anterior part of right side, from clavicle nearly to the base, with abundant crepitus in coughing; posteriorly on same side respiration rude in upper lobe, with distant crepitus; inferiorly respiration vesicular, nearly natural.

℞. Rad. Senega, ʒi.
Rad. Sanguinaria, ʒij.
in aq. Oj.—ʒij. every two hours.

In the evening had eight scarified cups applied to the anterior part of chest, on both sides, to take ʒviij. of blood; was neither puked nor purged by the infusion. Sweating profuse, particularly after the cupping in the evening.

9*th.*—Prostration considerable; decubitus on right side; dullness of intellect, but no lower nor delirium; nostrils dilating widely; eyes slightly injected; skin warm, a little moist; pulse one hundred and twenty-four, much fuller than yesterday, and slightly resisting; respiration fifty-six, noisy; expectoration very small, tenacious and whitish; tongue very red, rather smooth; no pain about abdomen; two stools; liver distended, passing two or three inches beyond rib; no tenderness, no nausea; great thirst. Percussion posteriorly flat at upper two-fifths of the right side; moderately sonorous inferiorly; dull at root of the left lung; respiration on right side at upper two-fifths intensely bronchial; very fine crepitus on coughing; crepitus throughout axilla and in lower lobe; rude respiration at middle of left lung, elsewhere respiration vesicular; bronchophony corresponds accurately with bronchial respiration. Anteriorly right side, bronchial respiration at summit; crepitus inferiorly; percussion dull; sounds of heart very feeble, impulse slight; dullness on percussion extends half an inch beyond nipple. Venesection pro re nata. Sinapism to lower extremities. Repeat the infusion every hour, until nausea.

In evening.—Pulse had again risen; some sub-crepitus was continued with the bronchial respiration, which was intense; was bled in the morning until he became faint, about ʒxv.; cupped to right side, No. iv. ʒvi. taken—afterwards was easy and went to sleep.

10*th.*—Took infusions of sanguinaria and senega every hour; was purged freely six times in four hours. In the afternoon diminished the dose to two ounces in every two hours. Expectoration has been very small in quantity; skin moist; no nausea occurred this morning, and no vomiting; cough a little looser; respiration nearly fifty in the minute. Continued infusion every two hours

11*th.*—Is still purged, three times in last four hours; three brown and very fœtid stools; no nausea; appetite returning for first time; sweating moderate; cough much more loose and frequent; expectoration, ʒi. to ʒiss. in twenty-four hours, thick, opaque, like half concrete albumen; dullness less marked; answers very readily; no cephalalgia; keeps well; dyspnœa; dilatation of nostrils less; pulse one hundred and ten, softer, and regular, but still a little resisting; respiration irregular; posteriorly on right side bronchial; respiration less intense in upper half; abundant crepitus, a little loose in lower half; tubal respiration in axilla, with no crepitus, but a little pleuritic creaking; anteriorly respiration vesicular and noisy; percussion flat at part where the bronchial respiration is heard. Discontinue infusion.

℞. Ipecac., gr. i.
Calomel, gr. i. } q. 4 h.
Opii. gr. $\frac{1}{6}$ }

11*th.*—6 P. M. Bowels open twice since morning visit; slight diaphoresis; no nausea; no cephalalgia; pulse seventy-eight, soft and irregular; respiration forty-eight, more noisy than in morning; cough slight, and expectoration still of a dark reddish colour and glutinous consistence. Continue ipecac., &c.

12*th.*—Less dull, still disposed to sleep; bronchitis in affected side; no pain; cough more loose; expectoration yellowish, a little puriform; less injection of eyes; sputa moist, still covered with glutinous liquid; skin moist, moderately warm; pulse ninety-two, soft and regular; respiration twenty-eight; five stools since evening visit; *asks for food;* bronchial respiration continues to same extent and degree as yesterday. In axilla crepitus larger and looser. Continue treatment.

12*th.*—6 P. M. Bowels open four times since last visit. Slight diaphoresis at present; pulse one hundred and twenty, full and irregular; respiration, forty-eight, noisy; coughs more than in the morning; expectoration still slight, not so dark, and more frothy than in the morning.

℞.—Scarified cups, No. viii to posterior lower half of chest. Continue ipecacuanha, &c.

13*th*—Bowels open three times since last visit. Tongue red and coated with a whitish fur in patches; skin warm and moist; pulse, ninety, soft, but irregular; respiration, thirty-six, not so noisy as last night; eyes still injected; nostrils

somewhat dilated; cough and expectoration slight.

℞.—Continue ipecacuanha.

13*th*.—6 P. M. Bowels open once since last visit. Tongue, red and dry; skin dry and hot; pulse, eighty-six, full and regular; respiration, thirty-two.

℞.—Continue treatment.

14*th*.—Somnolence; sputa moist, covered with a glutinous paste, like coat; no cephalalgia; intelligence clear; three stools in fifteen hours; appetite better; thirst less; no nausea; cough less violent and looser; expectoration mucous, nearly yellowish, not viscid; lies still on right side; sputa moist in the night; skin quite cool; pulse 104, feeble; respiration twenty-four, regular; tubal respiration on right side posteriorly continues in the upper two-fifths; in lower three-fifths vesicular, but feeble, with some crepitus; bronchial in axilla anteriorly; respiration rude, but vesicular.

℞.—Continue ipecacuanha. Mutton broth.

14*th*.—P. M. Continues about same as regards cough, expectoration, &c., as in the morning; pulse one hundred and four, full; respiration, thirty-two, regular and easy.

15*th*.—Bowels open three times since last visit; appetite improved; no pain, no cephalalgia; gums slightly affected; pulse one hundred and six, regular, and full; respiration, thirty-two, regular.

℞.—Continue ipecacuanha, every six hours.

On the 16th the countenance was more lively, the dyspnœa had almost ceased; cough looser; expectoration still characteristic, viscid, in part transparent, in part mucopurulent; respiration noisy, thirty; pulse eighty-two, irregular and soft; skin moist; tongue nearly clean, smooth and reddish; appetite returning; three stools in twenty-four hours. The respiration is becoming more vesicular at the root and lower lobe of the right lung; elsewhere there is but little change. Continue treatment.

On the 17th, the pulse was one hundred and two, and irregular; respiration forty-two. In other respects symptoms as before.

In the evening his pulse became more quick and corded; tongue dry and reddish, but the patient, instead of seeming more unwell, sat up half an hour, while the nurse was making his bed.

18*th*.—At noon he was in a state of profound stupor with injected conjunctivæ, and contracted pupils. Delirium had occurred in the morning; returns no answer to questions; skin moist and warm; pulse one hundred and twenty, quick and irritated, but rather feeble. Respiration thirty-five, a little stertorous; cough and expectoration have ceased since midnight; tongue very dry and red; respiration scarcely heard at the anterior part of the right side; vesicular at the left; sounds of heart so confused and rapid as to be scarcely distinguishable, but impulse very strong. Blister to occiput, ice to the head, sinapisms to extremities.

In the evening the pulse was one hundred and twenty; the delirium had continued throughout the day. Two discharges from the bowels.

19*th*.—Died at 12 o'clock.

Autopsy.

Head.—Arachnoid dry, especially on right side, adhering closely to convolutions; injection moderate, but it is formed of the smallest vessels, which seem to pass in abundance from cortical substance to pia mater; membranes throughout opaque, of a yellowish tint, much thickened, particularly near the tissue, where the thickening depends upon an effusion of a concrete yellowish substance. Lymph between arachnoid and pia mater; on left side the appearances are similar; the yellowish tint is most conspicuous near the middle and internal portions; the injection is decided, but much less between hemispheres; the cortical substance is brightly injected on both sides, particularly on right, which injection extends from finer vessels to medullary substance, giving it a yellow tint, also much marked on right side. The ventricles distended by three ounces of turbid serum, evidently mixed with purulent matter; the central portions are soft, but not diffluent; right ventricle, when fully opened, seemed smeared with a coating of lymph, which can be seized with the forceps, about the thickness of writing paper; in fact, however, it is thicker, softer, and not organized; same deposit extends to both ventricles, a little less abundant on left side than on right, it is most marked in both at their anterior extremity, over large extremity of optic thalami; the membrane itself is obviously thickened, and can be raised by forceps; it is easily detached, more injected, offering rather an orange tint, than distinct vessels.

Base of brain.—The prons varolii, medulla oblongata, are concealed completely by a coating of greenish lymph, filling up all the depressions, about the thickness of the derm, much thinner opposite the depressions, covers completely the origin of all the nerves, surrounds the medulla oblongata, but is less thick on posterior side, extends itself as a thin and incomplete covering over the inferior surface of the cerebellum, and follows the junction between it and cerebellum.

Anteriorly, it covers completely the commissure of the optic nerves, and is gradually lost about the middle of the olfactory, filling up on both sides the fissure of Sylvius, so that they cannot be separated without tearing the brain; rather more abundant on left than right side. The inferior lobes of the cerebrum very brightly injected without the effusion of lymph.

The consistence of the brain is generally good, as well as cerebellum, which is much paler than cerebrum.

Spinal marrow.—Membranes brightly injected exteriorly; the arachnoid, covering it, contains a coating of lymph, lining its inner surface; readily detached, soft; the spinal marrow itself is covered more or less completely with lymph, a portion of which is contained in the cavity of the arachnoid, another portion is combined with

the membrane, rendering them thick, and strongly adherent to the medulla. Upper portion of spinal marrow softened, particularly at the posterior part, which extends more or less throughout the whole extent, (probably cadaveric.) Traces of lymph are to be found in the arachnoid, down as far as the cauda equina.

Thorax.—Right lung, adherent throughout with strong cellular adhesions; upper lobe solid to the feel, heavy, flat on percussion. Tissue presents a marbled aspect of gray and red, friable, a yellowish-red liquid exuding; granulations indistinct, (beginning of third stage;) at the summit the tissue is uniformly red, and more granulated; at the inferior angle there is still a portion permeable in part, but of a deep red colour. The middle lobe adheres closely to the upper, and is hepatized in irregular lobules. The lower lobe is much smaller than usual, while the upper is larger. Tissue of a deep red, contains some air, floats, but throughout is much less soft than natural, and is evidently at the commencement of hepatization, some portions being decidedly granulated. Bronchial tubes of the upper lobe, entirely red, thickened, containing a viscid, whitish liquid; in lower lobes the tubes are much injected, but containing less liquid than upper.

Left lung contains air throughout; grayish externally; upper lobe is entirely permeable, of a bright red colour, (almost arterial,) a little dry, and very crepitant, a reddish liquid is pressed from it, and contains but little air; lower lobe of a deep red colour, with abundance of reddish and very frothy serum; even at the root of the lung the tissue is still permeable. Bronchial tubes filled with reddish mucus; membrane red, particularly in larger divisions. This lung not adherent except at base.

Pericardium contains about three ounces of transparent serum; a few whitish patches on the pericardium, half organized, and capable of being detached with moderate effort in other portions of its extent; this membrane is a little opaque, but scarcely injected.

Large febrinous coagula in both sides of the heart, well organized with minute reddish lines, like newly formed vessels. The internal membrane is but slightly injected, and is moderately opaque. At the mitral valve is an ulceration a third of an inch in diameter, with everted edges; the rest of this valve is but little thickened with no vegetation or lymph. The semilunar valves are thin, and near the edges of two of them is an evident erosion, the membranes being gradually thickened, almost like tissue paper. The valves in the right side are not altered.

Liver much enlarged, especially in right lobe, which is greater than usual; tissue of an uniform red; where engorged with blood, a little softened; bile very small in quantity.

Spleen eight inches long, firm, of a dull purple colour.

Kidneys firm, of usual weight, membrane readily detached; in the right a lobule is yellow, infiltrated with a substance very closely resembling tuberculous matter.

Aorta pale.

Stomach contracted, contains a thick whitish mucus; membrane generally pale, rather thicker and softened, (appearances doubtful,) near the pylora, intense injections, in irregular ecchymosed spots.

Small intestines.—Mesenteric glands larger than usual, a few contains some grains of tuberculous matter.

Mucous membrane pale and firm; glands at the lower extremity are not enlarged nor injected.

Large intestine contains greenish pulpy fœces.

You have here a case of pneumonia, which, at first, presented but few unusual features; indeed, the patient was entering upon convalescence when the cerebral symptoms appeared. In the early period of the disease you may have remarked that the brain was slightly affected, but this was only to an insignificant degree, such as we often see in pneumonia. The cerebral symptoms then declined with the improvement of the patient, until they suddenly re-appeared, in an insidious and most obscure manner.

If you had witnessed only the pathological changes which were so evident after death, you would, in all probability, have affirmed that the ordinary symptoms of violent arachnitis had corresponded to the large deposit of pus in the membranes of the brain, as well as the partial destruction of the cerebral substance. But you will find that arachnitis, more especially of the base of the brain, and of the interior of the ventricles, is by no means so very evident a disease. It may, and often does, pass to a fatal termination, without other symptoms than mere coma and stupor. These symptoms were present to a very slight degree at the commencement of this case, and were regarded as probable evidence of arachnitis, not of the intense form which it afterwards assumed, but of that mild sub-acute variety, which is so frequent in cases of pneumonia.

Even in the last stage of the disease, although the symptoms became very evident, there was no reason for believing that the lesion of the brain was nearly as considerable as was afterwards found.

In the present instance the inflammation of the brain was the more obscure, because it occurred during the course of pneumonia: the primary disease is much less apt to be latent.

The lesion of the lung corresponded accurately with the extent and period of the disease, as ascertained by the physical signs and the expectoration. It was confined to the right lung, but had reached the period at which the disease is generally most fatal; that is, the passage from the second into the third stage.

I did not intend to allude to this case as an illustration of the complication of endo-carditis. The affection of the brain was so much more prominent, and exercised so much more evident an influence upon the fatal termination than the cardiac inflammation, that I had reference in relating the case, only to the cerebral complication. During life, the attention was rather directed to

the lungs and brain than to the heart, but I observed that the pulsations were confused and irregular. On examination after death, we detected a very evident endo-carditis, which had produced ulceration of the mitral valve, and a partial erosion or ulceration of the semi-lunar valves of the aorta. Still there was no thickening, to a sufficient degree to impede the action of the valves, or to give rise to either an intense blowing or rasping sound. The usual signs of endo-carditis were much more obscure than they are in ordinary cases of the disease; this was the result of that general law of pathology to which I have so often referred. That is, secondary inflammations are much less evident than the primary affections of the same organs.

FOREIGN SUMMARY.

Professor Grant on the Infusoria.—Dr. Grant entertained the visitors this evening at the Royal institution, with a short account of the recent researches into the nature of the *infusoria*. He explained the import of the same by stating that the attention of philosophers was first directed to them as a product of putrescent infusions. The microscopic investigations of Liewenhoeck had thrown great light on the anatomical structure of these animalcules; and successive entomologists, but pre-eminently Ehrenberg, had made us acquainted with the almost universal presence of these creatures in nature. They were shown to be necessary inmates of all fluids; rivers and the profound ocean derived colour from them. The persons of men and the bodies of all animals were menageries for their entertainment. They had been found in the deepest mines yet penetrated, though totally removed from the influence of the sun's rays. They had been found (said the Doctor) in dried mud, in a state of suspended animation, and constituted a large portion of the clouds of dust which are transported by the winds over the earth's surface. Thus dry and torpid, and strown over the ground, by returning moisture they are restored to a state of active function. They are to be met with in all parts of the world, and their locality is not regulated by any distributory laws. They subsist in a state of hybernation within the arctic circle, and there are five or six hundred species of them existing in the sands of the African desert. The silicated kinds remain unscathed, even in sulphuric and muriatic acids. The imperfection of our present knowledge regarding them, prevents our forming an accurate classification of them; but Dr. Grant considers the lines of their organization, as drawn from East to West, more homogeneous than any that can be drawn from North to South. The *débris* of these animalcules constitutes an immense portion of the stratified rocks. The masses of flint found in the beds of the earth, are but agglomerations of defunct silicious infusoria, and the immense hills of chalk are supposed to be merely the exuviæ of similar animalcules. There can be no doubt, according to the lecturer, that these minute monads have been the architects employed in modifying the surface of the globe, and preparing it as a residence for man.

Dr. Grant divides these animalcules into two large classes—the wheel animalcules, or *rotiferæ*, and the more simple polygastric monads. The wheel infusoria are of complicate structure. They are supplied with œsophageal ganglia, and with organs of respiration, digestion, &c., rivalling in complexity and completeness a much higher grade of the animal kingdom. On this occasion he confined his attention chiefly to the polygastrica. Lamarque and one or two other naturalists thought that these animals were nourished by endosmosis, and that their movements were automatous, and not spontaneous; but the more accurate observations of Liewenhoeck, Spallanzani, Goets, Walp, Deicken, and Ehrenberg, have shown that they possess not only an alimentary canal varying in direction, but a masticatory apparatus. Ehrenberg's ingenious and elegant devices have constituted the most successful means of developing the structure of the polygastrica. Their immersion in coloured but innocuous infusions has pointed out the existence of a plurality of digestive pouches, whence their designation is derived. Many of these monads are of the most voracious character, and devour whole hecatombs of the inferior species. The Doctor demonstrated the structure of these creatures by a profusion of drawings and diagrams, in which the outward form, internal splanchnology, and mode of propagation, were most satisfactorily illustrated; such as of the *monus crepuscula*, the *valora globator*, &c., of which it would be impossible to give an adequate idea in letterpress. Thousands of species are parasites of the conferbæ, polevaceæ, &c.; whilst others, as has been said, are antovorans. But nothing connected with these animalcules is more astonishing than their propagatory powers. Their mode of generating is of two kinds, oviparous and *fasciparous;* and in many species both modes of propagation are in active operation. In numerous instances these monads spontaneously divide themselves into two, others into four segments, each of which is as perfect a being as the parent. It is known that several of the species propagate by this means at the rate of 124 millions in five hours. But such as propagate in both fashions are calculated to produce, in forty-eight hours, 120 millions of billions; or in other terms, one of these living specks which a strong microscope alone can render visible to the human eye, can, in 48 hours, magnify or multiply itself to a dimension of two cubic feet—a stupendous example of vital energy to which any thing visible in the higher animals is indeed feeble in comparison. These monads agglomerate together into immense communities, which exhibit various forms of contour—globular, oblong, or circular; and the mausolea of many of these defunct nations remain extant at this day in the shape of masses of flint. A new view of the nature of the ponipherous classes of animals had recently been promulgated in a memoir read

before the Institute of France, in which it is contended that the surfaces of the sponge are covered with innumerable distinct and independent monads. This theory Dr. Grant thought exceedingly probable.—*Medical Gazette.*

Scirrhus of the Œsophagus, (two cases.) With Remarks. By Professor Graves.—The two following cases were in our wards at the same time, and afforded a good opportunity of comparing together the symptoms observed in each. In one, Benjamin Spear, we for a long thought that the difficulty of swallowing was spasmodic, so completely was the power of deglutition restored (and that, as will be seen from the notes of the of the case, for many days) by passing an œsophagus bougie into the stomach. In the other, Thomas Berry, the patient could at all times swallow liquids with great facility. He was able to drink a tumbler of water with as much apparent ease as any healthy person; but soon after gulped up the fluid by mouthfuls; as the fluid passed readily into the stomach, and was only rejected after arriving there, the diagnosis was rendered very obscure, and I attributed his sufferings to disease of the stomach itself. On this account a trial was not made with the bougie, except once before the man's admission, by Mr. M. W. Murphy, the practising pupil who had the care of this patient while in the Hospital, a gentleman, to whose untiring industry and ability I have been frequently indebted for valuable observations. Mr. Murphy did not succeed in passing the bougie, but as he never before attempted this operation we did not attach a proper degree of credit to this trial.

Altogether I should hope that the account given of the symptoms and post mortem examinations of these two patients, will prove useful in elucidating the diagnosis of stricture of the œsophagus. These cases afford another example of the fluctuating, or even contradictory nature of certain symptoms in different individuals affected with the same disease. It is essentially necessary for the physician to be aware of this circumstance, for it teaches him, that in endeavouring to make out the true nature of any affection, he must refer not to a fixed, but a varying standard of comparison. Whether these variations, in the two following patients, could be accounted for by any differences in the diseased parts observed after death, must be left to the judgment of the reader.

Thomas Berry, æt. 64; admitted September 23d; ill four months. He states that he had always been temperate and healthy, and that about five months ago he was attacked, after exposure to cold, with cough, without expectoration, pain in the side, or any other symptom for about a month, when he experienced a slight pain at the ensiform cartilage, which generally came on after eating; this continued every day, becoming more severe for five weeks, and he then experienced a difficulty of swallowing, which he referred to the seat of pain, where he says his food always stopped for about two seconds, and was then rejected. These two symptoms, viz. pain at the ensiform cartilage, and inability to retain food, have every day become more distressing, and are the only things of which he complains; took no medicine before admission.

Present State.—Extreme emaciation, and great debility, having eaten scarcely any thing for the last two months, being quite unable to retain either solids or fluids; the latter pass without much difficulty into the stomach, and remain there for about half a minute, but are then gradually gulped up, apparently without an effort. The cough has been very troublesome for the last few days, accompanied with abundant mucous expectoration. Never vomited any black matter, or any thing except what he swallows.

Bowels have been costive since his illness commenced; frequently for eight days without a motion; appetite good; pulse 54; abdomen fallen; no tumour to be felt; the skin is shrivelled and dry, its elasticity quite impaired; tongue clean and moist; skin cool; sleeps tolerably.

Extr. Conii granum, Syrupi, Mucilaginis, aa q. s. ut ft. bolus. Quarter in die sumendus.

26th. Was able to retain the bolus, and also a small quantity of broth; feels improved; pain and tenderness in epigastrium diminished; urine high coloured.

27th. Cough very troublesome, preventing sleep; abundant sero-mucous expectoration; no change in the other symptoms.

Vesicat. abdom. Pulv. Conii gr. ii. ter die,

29th. The blister did not rise, though left on for twenty-four hours; milk now remains on his stomach, but a solid is immediately rejected. Complains of great pain in the epigastrium, where there is also considerable tenderness. He says he knows by the sensation which the food produces when going down, whether it will be rejected or not, and he so accurately foretells this, that many suspect he has a power of bringing it up when he pleases. When it is to come up it excites a kind of spasm, from which he seems to suffer much; pulse 70; cough very troublesome; expectoration copious, yellow mucus, mixed with a great deal of serum: no rale over any part of the chest.

Sinapismus abdomini.

30th. Sinapism produced no effect; took some tea and whey yesterday, which he immediately rejected, and was shortly after attacked with a severe pain about the false ribs, which he attributes to the straining; this with the cough kept him awake the greater part of the night.

Turpentine stupe, and afterwards a sinapism.

October 1st. He states, that yesterday evening he felt that "*his swallow had returned,*" and that his "*stomach was opened,*" and immediately ate a large bowl full of stirabout and milk, all of which he was enabled to retain on his stomach. Bowels opened once; all his symptoms are aggravated when the bowels are confined; acetic solution of cantharides to be rubbed to the abdomen.

3d. The last application caused vesication,

and he is to-day much improved, and can retain solids as well as fluids.

Repr.

6th. Ate some bread yesterday evening, but was unable to retain it, and has since frequently vomited; cough troublesome; complains of pain about the false ribs, also in the epigastrium, which is still tender; tongue moist.

Acidi Hydrocyanici medicinalis gutts. iii. ter in die.

24th. No material change since last note: one day he could retain his food, and the next would be unable to do so. Last night was attacked with severe pain in the right false ribs, which prevents him from taking a full breath: troublesome cough; copious expectoration. The whole of the right side is so tender that he cannot bear the slightest pressure: great thirst; tongue furred and moist; pulse 56.

26th. The pain last night became so severe in the right side that it caused a kind of convulsion, during which he worked violently for two hours. Tongue furred and moist; great thirst; can scarcely speak; extreme debility; has not eaten any thing for the last three days.

Died on the 27th.

Autopsy eighteen Hours after Death.—The abdomen was considerably distended, though before death it was remarkably collapsed, and tensely concave. On opening the abdomen the stomach and intestines were found distended with air; and in the latter were hardened fæces. On raising the stomach, the coats were so thin, and so much softened, that the fingers passed through them in every direction; the mucous membrane was very soft and easily detached. The last two inches of œsophagus were inflamed; and above this, to the extent of about three inches, was a continuous mass of scirrhous growth, contracting the œsophagus to about the size of a goose-quill; the mucous membrane above this was thickened and softened, and could be easily separated from the submucous tissue.

Left lung healthy; the right was connected by strong adhesions to the parietal pleura, in the cavity of which was found nearly a pint of thin fluid, mixed with shreds of lymph, (recent;) the lower portion of the lung was covered with lymph; spleen enlarged and very soft. Two of the vertebræ opposite the structure, presented knobs on their anterior surface. These knobs projected about three-quarters of an inch beyond the remaining surface of the vertebræ; they were covered with a thin lamina of bone externally, and they displayed a healthy cancellated structure, continuous with the cancellated tissue of the vertebral bodies. They consisted, therefore, of an exuberant growth of healthy bone, and they each comprised a portion of two contiguous vertebræ. The intra-vertebral substance had undergone a corresponding increase, and was prolonged so as to divide each knob into two portions. It could not be ascertained whether these bony protuberances had any connexion with the production of the stricture. In this case the vomiting or rejection of the food, *after it had passed the stricture*, was a very remarkable circumstance; it may, perhaps, be explained by supposing that the inflammation of the œsophagus extended to the stomach. The stomach was excessively thin and membranous; in fact it was, like all the muscles of the body, extremely emaciated. This case was watched and recorded by Mr. James Brady, one of our most distinguished pupils.

The scirrhous mass was in this man rather considerable, and had caused a nearly complete degeneration of all the tissues of the œsophagus. Posteriorly, where it was thickest, it was three-quarters of an inch in depth, and it had evidently arrived at the stage next to that of ulceration: it was not yielding or elastic. These circumstances account not only for the narrowness of the stricture, but for the inflammation of the mucous membrane of the stomach and œsophagus; on this account too the bougie would not pass.

In all these particulars it forms a strong contrast with the next case, where the morbid tissue was still elastic, and the stricture dilatable and free from inflammation.

Benjaman Spears, æt. 50, admitted into hospital August 29th, 1838. Had been a soldier, and and served many years in the East Indies; of most intemperate habits. Says he has been always healthy, never having jaundice or ague; never subject to cough or dyspnœa. Says that about a month since, he noticed a slight soreness on swallowing, referred to epigastric region, which continued for four or five days; when on attempting to swallow a piece of bread, he found it stop at a part corresponding to about the centre of the ensiform cartilage, and that he immediately rejected it; that since then he has been unable to retain any thing; that on its passing down, it is rejected in a few seconds without any effort; has taken nothing for three weeks. Bowels have been confined; had one movement each week; appetite has been bad, and his sleep much disturbed; has not had cough or pain in the chest.

Present state, August 30th.—Great emaciation; countenance sallow, and anxious; abdomen fallen; total inability to retain either solids or fluids. Feels, on attempting to swallow, a pain at inferior part of ensiform cartilage, to which he refers the obstruction; the food is returned without any effort, the diaphragm scarcely appearing to act. On measuring the quantity swallowed, and after its being rejected, it is found increased, appearing to be more than the addition of the saliva would produce. Some tenderness on pressure in epigastrium and right hypochondrium; has no pain elsewhere; no tumour; *no dyspnœa or cough;* much thirst; tongue dry and slightly coated. Bowels confined; extremities cold; pulse 100, very feeble and small; respiration 15, natural; on deep inspiration feels some soreness in right hypochondrium.

℞. Solut. Ichthyocol. ℥iii.
Tincturæ Opii. gutts. v.
Ft. Enema bis in die injiciendum.
Applic. Emp. Lyttæ Epigast.

The œsophagus bougie to be passed.

31st. Œsophagus bougie passed yesterday by Dr. Collis, *who says he met with no obstruction:* immediately after the passing the bougie, felt some water which he took pass beyond the obstruction; has taken some whey since, had slight nausea on swallowing it, but it remained.

31st. To get a pint of isinglass and milk.

September 1st. On attempting to swallow a small piece of meat yesterday, felt considerable pain, and rejected it immediately. Is able to swallow and retain the isinglass and milk; is greatly better.

4th. Has had no vomiting since; has taken the isinglass and milk regularly. Bowels are confined; has had no cough; was seized yesterday with a severe stitch in right side, under mamma, attended with dyspnœa.

7th. Had vomiting yesterday, but was able to retain some of his milk; is very weak; the pain in side better; very little cough. Tongue dry; pulse 76, very feeble.

9th. Total inability to swallow; every thing rejected; refers the obstruction to same place as before; pain in side better. Pulse 80; no cough. Bougie passed without difficulty.

10th. *Retained every thing after passing the bougie;* has much headache; the tenderness of the epigastrium nearly gone; pain in side better.

11th. Was seized with severe pain in right infra-mammary region last night, with much dyspnœa and cough; had no vomiting since.

12th. Pain still very severe; much cough; expectoration scanty; no vomiting.

13th. Pain still very severe; much cough; no vomiting.

14th. Pain still severe, preventing him from sleeping; had no vomiting.

18th. Pain in side still continues; is very weak; cough troublesome; sputa very abundant; *no vomiting.*

25th. In same way; *no vomiting;* expectoration profuse; pain less severe.

30th. In same way.

October 8th. Mentioned that he had a swelling in perinæum, which was opened by Mr. Crampton, and a large quantity of very fœtid, thin matter discharged, from which he found great relief. Cough very severe; expectoration very abundant.

12th. Very weak; continues in same way; cough severe; expectoration profuse, of same character as before.

18th. Expectorated in night a large quantity of puriform matter, very fœtid; is excessively weak; pulse 100, feeble and thready; extreme emaciation. Examined in infra-mammary region of the right side corresponding to seat of pain, a distinct gargouillement, with cavernous respiration, was for first time audible; pectoriloquy partial; extremities cold.

Died at three o'clock, on 19th.

Autopsy.—Appearance of body extremely emaciated. On opening the œsophagus, all its upper part was found quite healthy, to within three and a half inches of its termination, where a stricture existed, through which the little finger could not be passed, but which admitted a large metal bougie, one-quarter of an inch in diameter. On slitting open the structured parts, the mucous membrane appeared quite healthy, without any appearance of ulceration; and on dissecting the mucous coat off, the stricture was found to arise from a deposite of a cartilaginous structure in the circular fibres of the muscular coats, which, as well as the longitudinal ones, were exceedingly thin and scarcely to be distinguished; the deposit was irregular, being thicker in one part than another. The stricture was an inch and a half in length; the mucous glands above the stricture were somewhat enlarged; the stomach healthy, but contracted: and the intestines presented no morbid appearance. Strong adhesions attached the right lung to parietes, which on being torn through the fingers passed into a large superficial cavity of irregular depth, corresponding to the infra-mammary region, where the acute pain was complained of. Several crude tubercular deposits existed in different parts of the lung, but none of them in a state of softness; several small calcareous bodies were found in the apex of same lung: left lung was quite healthy.

In this case the stricture was easily dilated; and the operation of passing the bougie produced such remarkable and so long continued relief, that I was led to consider the obstruction as merely spasmodic, induced by a passing or temporary œsophagitis.—*Dublin Journal.*

Remarks on Burns. By Samuel Cooper.—That many persons who meet with burns die comatose, or else with great difficulty of respiration—asthmatic symptoms, as they were called—were facts well known to surgeons many years ago. The cause of coma was not, however, attempted to be explained, as it might correctly have been, by reference to the congestion of the vessels of the brain, and the effusion upon or within that organ, as subsequently demonstrated in post-mortem examinations; while the old practitioners, instead of looking at the congested and even inflamed lungs, by which they would have been able to account rightly for the oppression of the breathing, ascribed the latter frequent consequence of a burn to sympathy between the lungs and the injured skin. This was the doctrine which I used to hear inculcated by Abernethy.

The post-mortem examinations made by Dupuytren, of individuals who died of burns, threw quite a new light upon the subject. They proved, that when the sufferer perishes in the flames, or shortly after being removed from them, marks of excessive congestion are usually observable in the intestinal canal, although there has not been sufficient time for inflamation to commence. Not only does the mucous membrane exhibit bright red patches—not only is it gorged with blood, but the bowels contain a quantity of this fluid, which has been extravasated. He describes the brain as being largely injected with blood, and the fluid in the serous cavities of the body as presenting a reddish colour. He represents the mucous secretion of the bronchial tubes as also bloody, and their investing membrane as exhibit-

ing a bright red colour, and streaked with highly injected capillary vessels. It seemed to him as if the blood, suddenly repelled from the skin, made an effort to escape through the pores of every internal surface.

Our second case exemplifies the truth of most of these observations, with the exception that *the mucous membrane of the bowels was pale*, though the lungs and brain were much congested, and a bloody serous fluid was copiously effused within the cranium and the chest.

Dupuytren found that, if the patient died between the third and eighth days after the receipt of the burn, traces of inflammation of the bowels, lungs, and brain, were commonly noticed; but if the patient sank at a later period, or in the suppurative stage, the mucous membrane of the intestines was generally studded with patches of redness and ulceration, and that sometimes the mesenteric glands were enlarged.

As we have not met with such enlargement of the mesenteric glands in our post-mortem examinations of burnt patients, a doubt is left in my mind whether such enlargement, as remarked by Dupuytren, depended upon the burn, or upon the effects of scrofulous disease existing previously to the accident.

The entire perforation of the duodenum by ulceration, exemplified in our first case; the adhesion of the margins of the ulcerated opening to the pancreas; the discharge of great quantities of blood from the rectum before the patient sunk; and the blood found after death within the intestinal canal, and, no doubt, the source of which was the considerable ulcer in the duodenum; appear to me to be circumstances all deserving to be well remembered.

The vomiting, in our second case, first of a brown fluid, and, as early as the sixth day, of blood; the death of the patient at the end of the first week; the presence of several ulcers in the duodenum at this early date; its actual perforation in one place by the ulcerative process; and the presence of blood in the stomach, duodenum, and ileum, after death, are so many facts of great interest in relation to the pathology of burns. Dupuytren's observations would not lead us to expect ulceration of the bowels so early. As for the vomiting of blood, and its discharge *per anum*, I am not aware that he has adverted to these occasional consequences of burns at all.

Our last case, besides exemplifying several effects arising from visceral inflammations, presents us with an instance of an ulcer of the mucous membrane of the stomach nearly cicatrized.

These post-mortem investigations seem to me, gentlemen, not only to elucidate the causes of various symptoms, observed to follow burns, but to suggest the question, whether, in the stages of burn, attended with congestion, or actual inflammation of important internal organs, the taking away of blood from the patient would not be the most likely means of saving the patient's life. In France, I know that the use of leeches, in certain stages of burns, is advocated by some surgeons, as much as they are by certain practitioners here, in the commencement of an attack of erysipelas. In the period of reaction, between the third and eighth days, when the pulse is strong, and there is evidence of visceral inflammation having come on, what measure is so likely, I ask again, to save the patient? Let the result of a moderate abstraction of blood be first ascertained; and, if it be favorable, let the evacuation be repeated with circumspection.—*London Med. Gaz.*

Extract of Taraxacum.—Generally this has a sweet taste, and is readily soluble in water; but Mr. Squire, who has paid much attention to this and other extracts, informs me that, when cautiously prepared, and not unnecessarily exposed to the action of air, the extract is bitter, and that, when sweet, the medical efficacy of the remedy is impaired. It may be given in doses of half a drachm, or more, four or six times a day, dissolved in some aromatic water—a form preferable to that of pill. It may safely be prescribed as an alterative in cutaneous affections, and in those derangements of general health which are accompanied by obscure hepatic symptoms, and in which the usual treatment is ineffectual. Taraxacum is thought well of by several foreign writers of eminence, and is by them generally recommended in the form of liquid extract, or, as it is sometimes termed, *Mellago Taraxaci;* the expressed juice of the fresh root is also used in the dose of two fluid ounces every morning, with an equal quantity of milk.

According to John, the juice of taraxacum contains bitter extractive, caoutchouc, traces of resin, sugar, gum, a free acid, and sulphate, muriate, and phosphate of potassa and lime. For the following particulars respecting this root and its extract, I am indebted to Mr. Squire:—

"Fresh taraxacum root, when crushed and submitted to pressure, varies exceedingly, even in the same week, in the produce of extract, without any material difference being discernible in the root itself; and the average results of each month, taken separately, show a marked difference in the strength of the juice at different seasons. In the winter months, when it should be dug up for medicinal use, the fresh root loses, on drying, 75 per cent. of water. This root, washed, crushed, and pressed, will yield half its weight of dark juice, which coagulates, and becomes of a fawn colour. It yields, on evaporation, 25 per cent. of extract; but, if the expressed roots be further digested, more extract is obtained.

At different seasons of the year, one pound of extract is afforded by the following proportions of the expressed juice, namely:

January and February, 4 to 5 lbs. of juice = 1 lb. of extract.

March, 6 to 7 lbs. of juice = 1 lb. of extract.

April, May, 8 to 9 lbs. of juice = 1 lb. of extract, and during these months the juice is so aqueous, that it does not coadjulate spontaneously, as it does during the preceding months.

June, July, August, 6 to 7 lbs. of juice = 1 lb. of extract, and now it again coadjulates; the old roots are spongy, and the new ones very slender.

In September and October, 4 to 5 lbs. of juice = 1 lb. of extract.
In November and December, 4 lbs. of juice = 1 lb. of extract.

During November and December the root is in the most vigorous condition, and most abundant in those ingredients upon which its medicinal powers depend. Frost has a singular effect upon the growing roots, causing the bitterness to decrease, and sweetness to take its place; it is also observable that, on the disappearance of the frost, the bitter returns in a stronger degree, and the sweetness disappears.

The *dark* extract of the shops owes its sweetness to a curious change in the juice during evaporation; and if this process be much protracted, acetic acid is formed, which imparts to the extract a sensible acidity. When carefully prepared, extract of taraxacum is of a brown color, has a sensibly bitter taste, and a peculiar aroma, but it is not so sweet.

From the chemical examination which Mr. Squire has made of the expressed juice of the root of taraxacum, it appears to contain gum, albumen and gluten, an odorous principle, extractive, and a peculiar crystallizable bitter principle soluble in alcohol and water.—*Ib. from Brande's Dic. Mat. Med.* 1839.

Hospitals in Holland.—There are three hospitals in the Hague, one of which is civil, and the other two are military. The civil hospital is situated on the Zuid-wall, or south boulevard, in the neighbourhood of a flat and marshy country, resembling the fens of Lincolnshire. It is a neat brick building, capable of containing about two hundred patients; at present there is scarcely a fourth of that number. A stranger cannot obtain admittance without the permission of the medical man who constantly resides at the hospital, besides which a small donation is expected by the porter from each visitor. There are separate wards, (all small and extremely clean,) for medical, surgical, and obstetrical cases. The Jews occupy distinct wards, with attendants belonging to their own persuasion, in conformity with certain religious principles. There is a small and neat bath-room in the establishment. One case was shown to me in the surgical wards wherein there had been considerable inflammation of both corneæ, and had received the usual antiphlogistic treatment, with a seton in the arm. The method of coercion, adopted in a case of traumatic delirium, was by means of leathern straps, instead of a strait waistcoat. The principal strap was placed round the patient, close under the axillæ, and fastened from behind to the head of the bed. If the patient became very violent, the arms were confined at the wrist, close to the chest, by smaller additional straps attached to the larger strap, which encircled the body. In the medical wards three cases were pointed out to me—one of continued fever, which I was informed had been treated merely by lavements, and was doing well; the others were dropsy and cancer of the womb.

The obstetrical wards are divided into two departments; one smaller room for the actual delivery of the patients; the other for their reception after parturition. No contagious diseases are admitted in the hospital; there is, however, a separate building in progress, placed in the garden, for the reception of scarlet-fever, small-pox, measles, &c., which will contain four wards, two being intended for Jews. The garden is ornamented with an avenue of trees and flowers. The names of the physician and surgeon are Dr. Van de Watering and M. Wachter.

Military Hospitals.—There are two hospitals for soldiers at the Hague, the larger of which is termed the Military Hospital; the other, "Willem's Hospital," or hospital of the Princess of Orange.

The Military Hospital.—A stranger on applying to the porter of the military hospital for admission, is referred to the apothecary, who resides in the house adjoining, where he will readily obtain admittance, and a conductor to show the interior. The building is situated in the Burg-wall, and contains at present about one hundred and fifty patients; but when the new part is completed it will accommodate a great many more. There are separate wards for medical and surgical cases; and of the latter, the syphilitic and ophthalmic patients have wards exclusively to themselves. Ophthalmia is very prevalent. I was informed that there were two surgeons attached to the hospital, a surgeon-major, and one of the second class, who attended twice daily.

The Hospital of the Princess of Orange is situated in the Hekkelaan. It is fronted by a high wall inclosing a neat garden, and contains scarcely any patients at present, although large enough to hold a hundred persons.

Medical Remuneration.—The usual fee for the visit of a physician is a guilder or florin, which equals one shilling and eight-pence in English money. Several of the poorer tradespeople at the Hague subscribe a very small sum annually, to remunerate a particular medical man, and each family receives his attendance during the continuance of this subscription.

License to practise.—After a physician has received his diploma from one of the universities in Holland, if he wishes to practise, the diploma must be examined and signed by a person appointed for that purpose over each state and district in the country.—*Ib.*

The Dublin Hospital Reports.—A new volume of this important work is announced as being in course of preparation. On the high and justly earned character of the Dublin Hospital Reports, it is unnecessary for us to make any observation: for many years previous to the publication of the Dublin Medical Journal, this work and the Transactions of the Association of the College of Physicians were the only medical works emanating from Dublin in which reports and essays on surgical and medical subjects could be published.

Dublin Journal.